

(f) a speech recognition unit for recognizing an input speech sound following the first utterance using the distortion coefficient, the selected trained patterns and the word lexicon.

5 17. A speech recognition apparatus according to claim 16 wherein
(a) said pattern selection unit selects the adaptable trained patterns by
distance calculation between the acoustic parameters of the first utterance by
the speaker and the trained patterns, the trained patterns comprising

10 (a1) an average value of utterance for each characteristic
category,

(a2) an average value of each lexical unit by every speaker,
and

(a3) a covariance value of the utterance by every speaker,

(b) said pattern selection unit outputs the trained patterns comprising

15 (b1) an average value of utterance for a selected
characteristic category, and

(b2) a covariance value of the utterance for the
characteristic category.

20 18. A speech recognition apparatus according to claim 16 further
comprising a pattern selection word file including known words to be selected
as patterns.

25 19. A speech recognition apparatus according to claim 18 wherein the
known words of said word lexicon respectively include known words to be
recognized with a second utterance.

30 20. A speech recognition apparatus according to claim 18 wherein said
speech recognition unit further comprises a function of registering a new
vocabulary.

35 21. A speech recognition apparatus according to claim 16 further
comprising a reset signal generation unit for resetting usage of the selected
trained patterns and the obtained distortion coefficient and for using a next
input speech sound as a first utterance.

22. A voice controller comprising:

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- (a) a sound input unit for receiving a speech sound;
- (b) an acoustic analysis unit for acoustically analyzing the speech sound from said sound input unit to provide acoustic parameters;
- (c) a pattern by-characteristic storage for previously holding a plurality of trained patterns classified by characteristic of a training speaker;
- 5 (d) a pattern by-characteristic selection unit for selecting adaptable trained patterns from the plurality of trained patterns based on a first utterance by a speaker;
- (e) a speaker adaptation processor for obtaining a distortion coefficient fixed by spectral region of speech for acoustic parameters of the first utterance by the speaker, using the acoustic s and the trained patterns selected by said pattern selection unit;
- 10 (f) a word lexicon comprising known words for recognition objects.
- (g) a speech recognition unit for recognizing an input speech sound following the first utterance using
- 15 (g1) the distortion coefficient ,
(g2) the selected trained patterns, and
(g3) the word lexicon; and
- (h) a control signal output unit for outputting a control signal from said speech recognition unit.

23. A voice controller according to claim 22 wherein

25 (a) said pattern selection unit selects the adaptable trained patterns by distance calculation between the acoustic parameters of the first utterance by the speaker and

the trained patterns, the trained patterns comprising

30 (a1) an average value of utterance for each characteristic category,

(a2) an average value of each lexical unit by every speaker, and

(a3) a covariance value of the utterance by every speaker,

35 (b) said pattern selection unit outputs the trained patterns comprising

(b1) an average value of utterance for a selected characteristic category, and

(b2) a covariance value of the utterance for the characteristic category.

24. A voice controller according to claim 22 wherein

- (a) one word of one or a plurality of previously prepared known words is used for selecting the trained patterns, and
- (b) selection of a device controlled in response to the control signal is performed using the known word.

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25. A voice controller according to claim 23 wherein

- (c) one word of one or a plurality of previously prepared known words is used for selecting the trained patterns, and
- 10 (d) selection of a device controlled in response to the control signal is performed using the known word.

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26. A voice controller according to claim 22 wherein the known word for selecting the trained patterns can be registered by the speaker.

27. A voice controller according to claim 23 wherein the known word for selecting the trained patterns can be registered by the speaker.